

TERMS

[appearing in Chap 1: States of Matter]

1. **Matter** - Anything that has mass and occupies space is called matter.
2. **Plasma** – It is the fourth state of matter consisting of super energetic particles in the form of ionised gases. The fluorescent tube, neon sign bulbs consists of plasma. The plasma is created in starts due to high temperature.
3. **Bose-Einstein Condensate (B.E.C)**- It is the fifth state of matter which is formed from matter that has been cooled to near absolute zero (-273oC) thus the velocities of atoms decrease causing individual atoms to overlap forming a single super atom. For e.g., a rotating B.E.C. could be used as model black hole, allowing light to enter but not to escape.
4. **Evaporation** – The phenomenon of change of liquid to the vapour state any temperature below the boiling point of the liquid is termed as evaporation.
5. **Transpiration** – The process of evaporation of water from the aerial parts of plant especially leaves is called transpiration.
6. **Latent Heat of vaporization** – The amount of heat energy that is need to convert one kg of a liquid at its boiling point temperature into its vapour state without any rise in temperature, is termed as latent heat of vaporization.
7. **Sublimation** – Sublimation is the change of a solid directly into the gaseous state without passing through the liquid state upon heating and back to the solid state when the temperature is lowered.
8. **Dry Ice** - **Dry ice** is a form of solid carbon dioxide that is used to keep things cold and to create smoke in stage shows.
9. **Pressure** - **Pressure** is an expression of force exerted on a surface per unit area.
10. **Boiling Point** – The temperature at which a liquid starts boiling at the atmospheric pressure is known as boiling point.
11. **Melting Point** – The melting point of a solid may be defined as the temperature at which a solid melts to become a liquid at the atmospheric pressure.
12. **Freezing Point** – The temperature at which a liquid change to solid by giving out heat at the atmospheric pressure.
13. **Latent Heat of Fusion** – The amount of heat energy that is needed to convert one kg of a solid into the liquid state at atmospheric pressure at its melting point is termed as latent heat of fusion.
14. **Compressed Natural Gas [CNG]**-Compressed natural gas is a fuel which can be used in place of gasoline, Diesel fuel and propane/LPG. CNG combustion produces fewer undesirable gases.
15. **Diffusion** – The processes in which particles of one substance occupy the vacant spaces present in the particles of the other substance, is called diffusion.
16. **Fluid** - Fluids are the substances which have the property to flow(fluidity). They are not stable they flow continuously.
17. **Solid** -Solid is defined as that form of matter which possesses rigidity, is incompressible and hence has a definite shape and a definite volume.
18. **Liquid** – Liquid is defined as that form of matter which possesses fluidity but is almost incompressible and hence has a definite volume but no definite shape.
19. **Gas** – Gas is defined as that form of matter which possesses fluidity but is highly compressible and hence neither definite shape nor definite volume.
20. **Humidity** – The amount of water vapour present in the air.
21. **Density** – It is the mass occupied by a solid per unit volume and is obtained by dividing the mass of a particular solid by the volume occupied.
22. **Condensation**- The process in which a gas changes into liquid state by giving out heat at constant temperature.
23. **Fusion** – The process in which a solid change to liquid state by absorbing heat at constant temperature.
24. **Solidification** – The process of freezing (change of liquid into solid state) is called solidification.
